

# Farm Equipment Sales Continue to Expand<sup>1</sup>

**P**RODUCTION and sales of farm equipment continued to expand during 1936 and so far in 1937, with current output comparing favorably with the average of the predepression years. Figures recently released by the Bureau of the Census reveal a rise of 46 percent in production and of 37 percent in total sales in 1936 over the comparable figures for 1935 and, while comparable data are not available for recent months, the employment data and other information which has been published indicate that a further marked improvement has occurred during the current year. Value of production during 1936 exceeded the combined value of domestic and export sales by 9 percent, according to the Census data.

## Sales Follow Fluctuations in Farm Income.

The farmer's ability to buy equipment is, of course, to a major degree dependent upon his income, and the improvement in his potential demand is clearly demonstrated by the data presented in figure 2. Reflecting increased production of livestock and livestock products, higher farm prices, Government payments under the Agricultural Adjustment and the Soil Conservation Acts, and relatively stable production expenses, the amount of cash income available to the operator for his labor, capital, and management recorded its fourth successive increase in 1936. This 1936 net income was the largest in recent years.

It is evident from figure 2 that sales of farm equip-

ment have followed rather closely the trend of income in recent years, despite the marked year-to-year changes in the latter.<sup>2</sup> Monthly data on production and sales of farm equipment are not available, but on the basis of the close correspondence between the movements of sales of farm equipment and cash income available to the farmer for his labor, capital, and management, the 16 percent gain in total cash income<sup>3</sup> during the first 4 months of 1937 over the corresponding period of 1936 suggests a continuation of the upward trend in the volume of farm equipment business.

Further evidence of this trend is afforded by the data on employment and pay rolls in agricultural implement manufacturing plants which are reported monthly by the Bureau of Labor Statistics. In April of this year, both employment and pay rolls were at the highest levels of the recovery period. As shown in figure 1, the annual changes in these two series follow closely the variations in farm equipment manufacturing. Also indicative of the current trend is the recent report that billings of the company which handles a considerable part of the farm equipment business were about 30 percent larger for the 6 months ended April 30 than in the corresponding period of the preceding fiscal year.

Other basic factors influencing the upward movement in farm implement business are: (1) the obsolete

<sup>1</sup> Refers to cash income available to the farmer for his labor, capital, and management and represents gross income less all production expenses and the value of products used in the farm home. This series and the one mentioned in footnote 3 are compiled by the Bureau of Agricultural Economics, U. S. Department of Agriculture.

<sup>2</sup> Cash income in this instance relates to the value of quantities sold, excluding products used in the farm home.

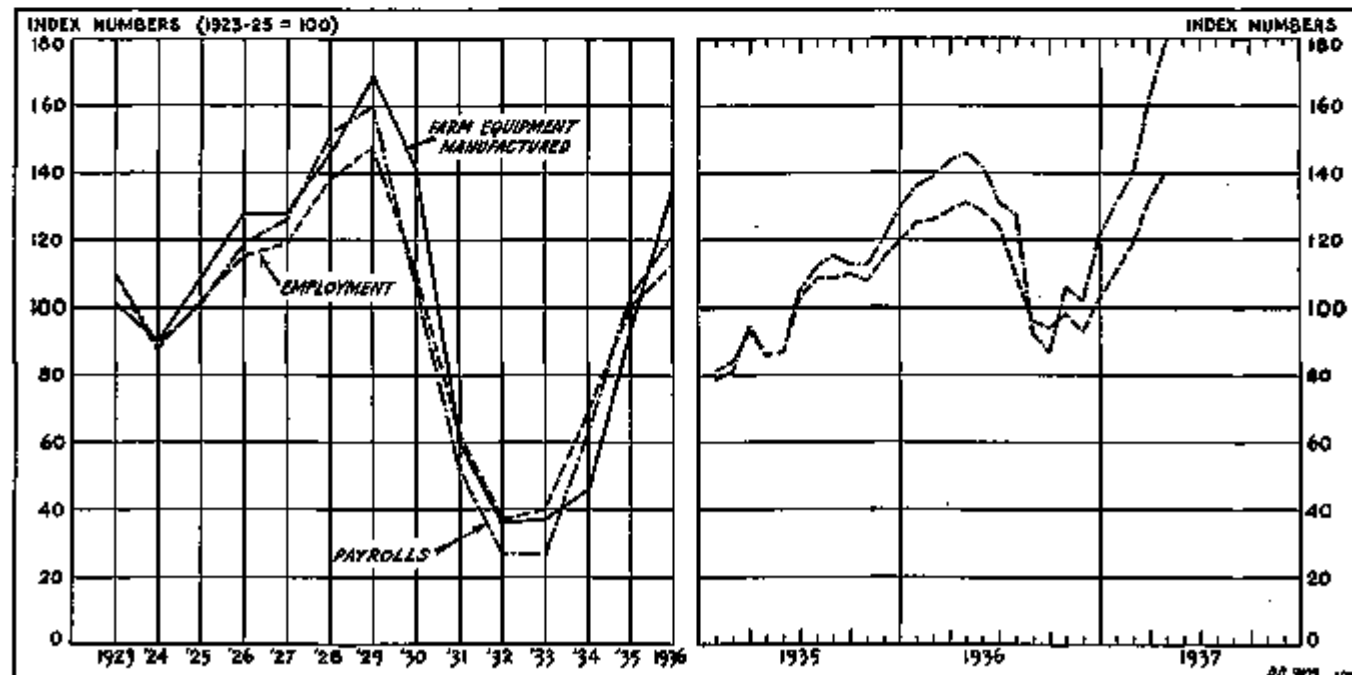


Figure 1.—Value of Farm Equipment and Related Products Manufactured Compared with Employment and Pay Rolls in the Agricultural Implement Industry. (U. S. Departments of Commerce and Labor.)

condition of an undetermined part of the existing farm equipment which has resulted from the curtailment of necessary replacements during the depression years; (2) the development of new types of machines which contribute to the efficiency and economy of farm operation; and (3) the increased demand from abroad since 1932.

#### Production in 1936 Only 4 Percent Below 1930.

Farm equipment manufactured in 1936 had a value of \$487,273,000, and domestic sales amounted to \$409,090,000, according to preliminary data compiled by the Bureau of the Census. Production was only 4 percent below the 1930 figure of \$507,002,000 and 20 percent below that of 1929, which was the best year on record. The 1936 figure was about four times the estimated value of the production for 1932.

The fourfold classification of farm equipment manufacture shown in figure 3 represents combinations of the items given in the more detailed statement issued by the Bureau of the Census. This condensed classification affords a means of showing the changes from year to year in each major group, and indicates the relative importance of each group.

Tillage equipment includes plows, harrows, cultivators, planting and seeding machinery, and in general those machines which are used to prepare the soil and to plant and care for the growing crop up to the time of harvest. The second group, harvesting machinery, is made up of grain binders, corn binders, reapers, combined harvester-threshers, threshing machines, and in general all equipment used in harvesting the crop and preparing it for market.

The third and most important class from the standpoint of value of product, is the tractor group which

comprises all types of tractors and parts. The fourth class, miscellaneous farm equipment, includes a wide variety of machinery and appliances not used directly in the produc-

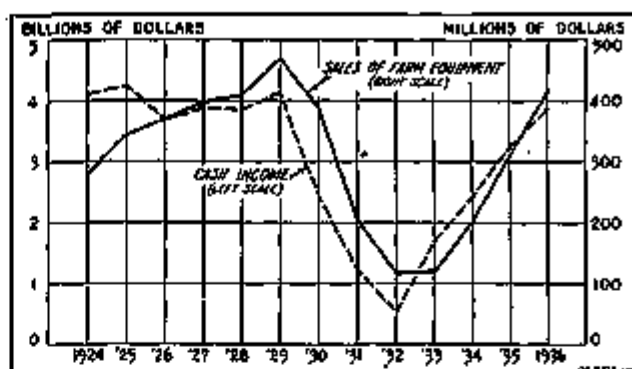


Figure 2.—Domestic Sales of Farm Equipment and Related Products Compared with Cash Income Available to the Farmer for His Labor, Capital, and Management. (U. S. Department of Commerce and Agriculture.)

tion of crops but which are important on every farm, such as barn, dairy, and poultry equipment, and windmills.

#### Tractors Most Important Product.

Figure 3 depicts the trend of production from 1920 through 1936, omitting a breakdown for the years 1932-34 for which comparable figures are not available. The relative importance of the four classes changed very little in 1936 as compared with 1935, although the chart brings out the major shifts that have occurred over the past 17 years. The tractor group continued as the most important of the four major classes, output being valued at \$214,854,000, or more than 40 percent of the value of all farm equipment produced. The gain from 1935 to 1936 in the value of tractors and parts produced amounted to 45 percent. Tillage, planting,

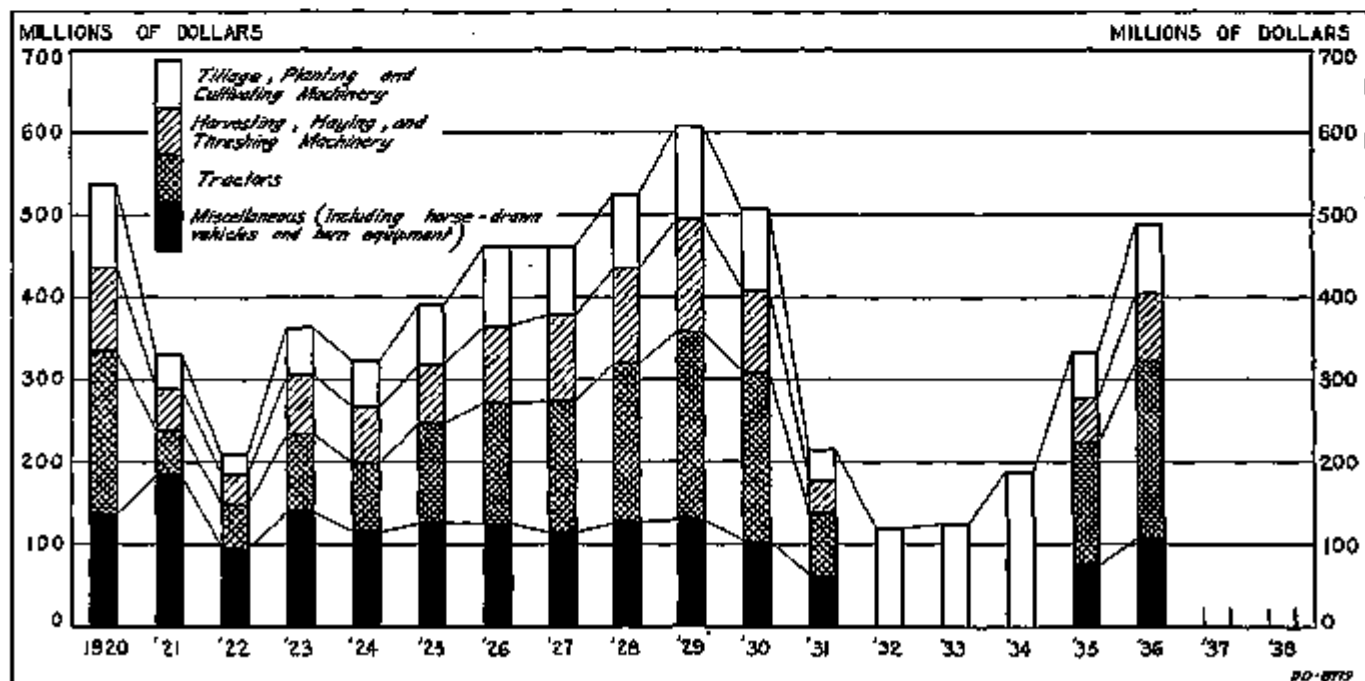


Figure 3.—Value of Production of Farm Equipment and Related Products (Bureau of the Census, U. S. Department of Commerce).

NOTE.—The Census of production of farm equipment and related products was not taken for the years 1932 to 1934, inclusive. The totals for these years are unofficial estimates.

and cultivating machinery recorded a gain of 46 percent, while the value of harvesting machinery increased 54 percent and of miscellaneous equipment, 40 percent.

The accompanying table gives comparative figures on production and sales of the principal classes of farm equipment and related products for the years 1930, 1931, 1935, and 1936. For both 1935 and 1936, the figures indicate an increase in manufacturer's stocks in practically all major lines. In the spring of 1936, however, most manufacturers experienced considerable difficulty in meeting the heavy demand, and it was not until later in the year that stocks were built up.

#### Export Trade Increased.

Exports of farm equipment and related products recorded marked improvement in 1936. With relation

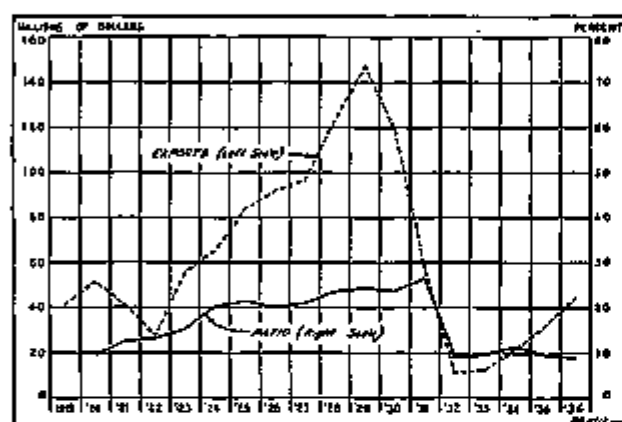


Figure 4.—Exports of Farm Equipment and Related Products and the Percentage of the Production of These Products Exported (Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce).

to 1929, however, foreign sales are still much lower than domestic sales. Thus, while exports in 1936 totaled \$43,993,899, according to data compiled by the Bureau of Foreign and Domestic Commerce, a gain of 37 percent over 1935, they were less than one-third as large as in 1929. Domestic sales, on the other hand, were more than three-fourths as large as the 1929 total.

Exports were valued at about 9 percent of 1936 output as compared with nearly 10 percent in 1935 and 27 percent in 1931, when the Union of Soviet Socialist Republics was buying heavily in this country. Shipments to Canada, which continued as the largest buyer of United States farm equipment, recorded a gain of 58 percent in 1936 as compared with 1935, reflecting in part improved farm purchasing power in that country, the removal of tariff duties on tractors and the lowering of duties on other farm machinery. Australia moved from third place in 1935 to second place last year, while Iran, a comparatively small buyer, moved from 37th place to 20th place, mainly as a result of heavy tractor purchases. The Soviet Union, which was the third largest buyer in 1929, had dropped to 54th place by 1936, equipment needs in that country now being met largely by their own plants.

Tractors have continued as the most important single item in foreign as in domestic sales. Sales of tractors and parts abroad in 1936 recorded a gain of 55 percent over the preceding year and accounted for 65 percent of the value of all exports of farm equipment. An important factor in the expansion of tractor exports has been the development of the all-purpose type tractor and the fuel injection type (Diesel and semi-Diesel); due to economy of operation, the latter is becoming increasingly popular in countries having high gasoline prices.

Exports for the first quarter of 1937 were 63 percent over the corresponding period of 1936. They were the largest for this period since 1931 but less than 40 percent of those for the earlier period.

Table 1.—Value of Farm Equipment and Related Products Manufactured and Sold, by Classes: 1936, 1935, 1931, and 1930

[The sales statistics refer only to sales by manufacturers and do not cover sales by dealers to consumers. The principal difference between these sales as reported by manufacturers and the value of exports as reported by the Bureau of Foreign and Domestic Commerce is the fact that many manufacturers report to the Bureau of the Census on a fiscal-year basis, whereas the reports of the Bureau of Foreign and Domestic Commerce are compiled on a calendar-year basis. The figures for export sales understate somewhat and those for domestic sales correspondingly overstate the amounts of the actual sales, because of the fact that some manufacturers sell to middlemen who export a part but not all of the commodities they purchase, so that manufacturers do not in all cases know whether their products are destined for export. The value figures include values of attachments and parts.]

Class	Year	Manufactured	Sold by manufacturers—		
			Total	For use in United States	For export
Total.....	1936	487,273,429	448,135,643	408,090,155	37,045,488
	1935	354,310,281	328,444,120	302,229,557	24,185,933
	1931	314,290,792	248,979,623	(1)	(1)
	1930	507,082,259	480,443,234	353,190,710	93,257,810
Planting, seeding, and fertilizing machinery.....	1936	23,273,718	21,634,725	20,092,340	1,542,385
	1935	15,018,284	15,247,299	14,083,170	1,164,129
	1931	10,892,062	10,884,044	(1)	(1)
	1930	20,087,101	21,343,700	21,029,571	2,303,825
Plows and listers.....	1936	20,090,778	20,032,880	20,023,029	1,009,851
	1935	10,031,803	10,000,042	10,000,042	1,000,000
	1931	12,004,030	12,000,000	(1)	(1)
	1930	37,886,174	37,478,080	36,483,005	8,600,502
Harrow, rollers, pulverizers, and stalk cutters.....	1936	13,290,000	12,133,770	11,697,826	535,120
	1935	9,087,002	8,568,909	8,291,218	277,124
	1931	6,807,708	6,382,808	(1)	(1)
	1930	13,814,790	13,043,401	11,637,504	1,405,897
Cultivators and weedeaters.....	1936	18,788,180	17,341,934	16,731,362	610,572
	1935	11,972,223	11,838,897	11,805,074	333,823
	1931	8,506,204	10,729,330	(1)	(1)
	1930	21,692,103	19,896,350	18,799,206	1,107,144
Harvesting machinery.....	1936	40,047,789	40,898,398	39,605,018	1,293,380
	1935	23,406,039	27,767,483	26,401,047	2,286,441
	1931	19,855,370	25,298,710	(1)	(1)
	1930	62,146,315	55,652,635	42,000,211	13,772,324
Mowing machinery.....	1936	18,947,064	18,032,042	16,927,054	1,104,988
	1935	14,758,179	16,190,621	14,705,095	1,485,526
	1931	7,682,863	7,737,719	(1)	(1)
	1930	17,186,426	16,647,856	14,060,774	2,587,082
Machines for preparing crops for market or use.....	1936	25,651,738	20,131,184	18,058,190	2,072,994
	1935	16,477,209	15,906,788	15,030,444	876,344
	1931	12,048,200	13,760,850	(1)	(1)
	1930	30,700,100	22,022,810	18,942,307	3,101,503
Tractors.....	1936	214,308,983	190,030,630	171,830,809	18,200,821
	1935	147,834,029	137,900,418	127,433,943	10,466,475
	1931	78,572,447	88,123,434	(1)	(1)
	1930	208,609,139	190,530,710	133,044,439	57,486,271
Engines.....	1936	18,047,064	14,032,042	14,032,042	0
	1935	11,151,001	10,400,744	9,942,451	458,293
	1931	3,022,007	3,104,742	(1)	(1)
	1930	6,104,100	6,523,061	4,772,017	1,751,044
Farm wagons and trucks.....	1936	7,837,900	7,795,849	7,758,081	37,768
	1935	6,886,811	6,806,942	6,778,430	28,512
	1931	1,884,008	1,810,700	(1)	(1)
	1930	4,999,040	4,994,700	4,814,512	184,188
Miscellaneous farm machines and equipment.....	1936	83,906,010	82,000,233	79,284,084	2,716,149
	1935	69,794,937	69,127,530	66,800,008	2,327,522
	1931	57,410,040	57,305,222	(1)	(1)
	1930	98,772,231	91,972,072	85,104,001	6,868,071

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Statistics for 1935 and 1936 include data for engines up to 104 horsepower, whereas those for 1931 and 1930 include data for engines up to 24 horsepower only.

Sources: Bureau of the Census, U. S. Department of Commerce.